

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: Rory A.J. Curtis

Serial No.: N/A

Filed: Herewith

For: 25466, A HUMAN TRANSPORTER FAMILY  
MEMBER AND USES THEREFOR

Attorney Docket No.: MPI2001-019P1RCP1(M)

Assistant Commissioner for Patents  
Box Sequence  
Washington, D.C. 20231

**TRANSMITTAL LETTER FOR DISKETTE CONTAINING COMPUTER READABLE  
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Sean Hunziker  
Sean Hunziker

Please Print Name of Person Signing

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# SEQUENCE LISTING

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Millennium Pharmaceuticals Inc.

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Therefor

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<151> 2001-02-15

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| Ser Phe Tyr Ile Cys Gly Leu Leu Tyr Met Ile Gly Ile Leu Phe Leu     |      |
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Asp Ile Thr Gln Lys Tyr Asp Phe Ser Phe Tyr Ile Cys Gly Leu Leu
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Ala Trp Met Met Val Leu Ser Ser Phe Phe Val His Ile Leu Ile Met
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| Gly Trp Val Leu Ser Ala Tyr Ala Ala Asn Val His Tyr Leu Phe Ile |     |     |     |
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| 450 455 460   |      |
| gac atc acg caa aaa tat gat ttt tcc ttc tac ata tgt ggt ttg ctt | 1440 |
| Asp Ile Thr Gln Lys Tyr Asp Phe Ser Phe Tyr Ile Cys Gly Leu Leu |      |
| 465 470 475 480   |      |
| tac atg ata gga ata ctc ttt tta ctt att cag ccg tgc att cga att | 1488 |
| Tyr Met Ile Gly Ile Leu Phe Leu Leu Ile Gln Pro Cys Ile Arg Ile |      |
| 485 490 495   |      |
| ata gaa caa tcc aga aga aaa tac atg gat ggt gca cat gtt tag     | 1533 |
| Ile Glu Gln Ser Arg Arg Lys Tyr Met Asp Gly Ala His Val *       |      |
| 500 505 510   |      |

<210> 4  
 <211> 611  
 <212> PRT  
 <213> Artificial Sequence

<220>



<223> consensus

<400> 4

Ser Phe Leu Ile Asn Gly Phe Thr Asp Gly Phe Pro Lys Ser Phe Gly  
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20 25 30  
Glu Thr Ser Trp Asp Ser Ile Ser Ile Leu Leu Ala Val Leu Leu  
35 40 45  
Phe Ala Gly Pro Leu Ala Ser Ile Leu Val Asn Arg Phe Gly Cys Arg  
50 55 60  
Leu Val Thr Ile Ala Gly Gly Leu Leu Ala Ser Ser Gly Met Val Leu  
65 70 75 80  
Ala Ser Phe Ala Thr Asn Ile Ser Glu Leu Tyr Leu Thr Phe Gly Val  
85 90 95  
Ile Thr Gly Leu Gly Phe Ala Phe Ile Tyr Leu Pro Ala Ile Val Ile  
100 105 110  
Ile Thr Ser Tyr Phe Glu Lys Lys Arg Ser Leu Ala Thr Gly Ile Ala  
115 120 125  
Val Ala Gly Ser Gly Val Gly Thr Phe Val Leu Ala Pro Leu Asn Pro  
130 135 140  
Asp Gln Phe Leu Ile Glu Asn Tyr Gly Ser Lys Trp Arg Gly Ala Leu  
145 150 155 160  
Leu Phe Phe Gly Gly Met Gly Tyr Val Ile Ala Ile Trp Ser Val Ala  
165 170 175  
Ile Val Leu Asn Cys Cys Ile Ala Gly Ala Leu Phe Arg Pro Leu Pro  
180 185 190  
Ser Glu Lys Val Lys Gln Thr Lys Leu Ala Lys Ala Glu Glu Pro Lys  
195 200 205  
Glu Ala Leu Lys Ser Lys Glu Asn Glu Ala Ser Glu Ser Ile Asp Ser  
210 215 220  
Ile Arg Ser Ala Ala Lys Ala Ile Val Ser Pro Glu Thr Pro Ala Leu  
225 230 235 240  
Ser Leu Ser Pro Glu Leu Thr Pro Lys Lys Asp Gln Leu Gln Lys Leu  
245 250 255  
Leu Lys Thr Ser Arg Thr Arg Ser Ser Asn Gly Ala Lys Leu Leu Asp  
260 265 270  
Phe Ser Val Leu Lys Asp Ala Arg Gly Phe Leu Leu Tyr Ala Ser Ser  
275 280 285  
Gly Ser Leu Ala Ser Leu Gly Thr Gln Leu Phe Leu Pro Gly Ser Ile  
290 295 300  
Phe Leu Val Asn Phe Ala Lys Ser Leu Gly Glu Ser Leu Ser Ser Val  
305 310 315 320  
Lys Ser Lys Glu Ala Ala Phe Leu Leu Ser Ile Leu Gly Asp Ser Ser  
325 330 335  
Asp Lys Glu Gly Phe Gly Gly Ile Phe Ala Arg Pro Ala Thr Leu Leu  
340 345 350  
Ser Phe Leu Gly Phe Val Ala Asn Leu Lys Glu Thr Lys Ser Asn Arg  
355 360 365  
Pro Val Leu Ile Tyr Leu Leu Ser Leu Cys Ser Ile Val Ala Val Val  
370 375 380  
Ile Asn Gly Ile Leu Ser Arg Leu Ala Ser Ala Leu Ala Gly Ser Arg  
385 390 395 400  
Lys Glu Lys Lys Ile Lys Ser Met Ile Asp Lys Ile Glu Leu Lys Ser  
405 410 415  
Thr Phe Trp Gly Leu Phe Leu Phe Ser Leu Phe Phe Gly Val Gly Phe  
420 425 430  
Gly Ser Lys Lys Ala Val Val Ile Leu Ala Leu Gly Phe Leu Leu Phe  
435 440 445  
Ser Ile Leu Tyr Ala Ile Pro Val Val Gly Leu Gln Lys Tyr Ser Ser  
450 455 460

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Ala Leu Gly Leu Thr Glu Thr Asp Ala Ser Thr Leu Ile Glu Ala Ile  
 465 470 475 480  
 Ala Val Leu Asn Ile Ile Gly Arg Pro Leu Ala Gly Leu Leu Ala Asp  
 485 490 495  
 Lys Thr Lys Asn Arg Lys Leu Ala Ile Tyr Asn Leu Ser Leu Ile Leu  
 500 505 510  
 Cys Gly Leu Phe Val Ala Phe Ala Pro Leu Ala Thr Ile Phe Leu Gly  
 515 520 525  
 Leu Ala Phe Tyr Cys Val Leu Phe Gly Ser Ile Val Phe Leu Leu Ala  
 530 535 540  
 Tyr Ala Phe Lys Gly Phe Cys Lys Gly Ser Tyr Ile Ala Leu Thr Ser  
 545 550 555 560  
 Val Ile Ala Val Asp Leu Thr Gly Leu Asp Lys Leu Ser Asn Ala Phe  
 565 570 575  
 Gly Leu Leu Leu Leu Phe Gln Gly Val Ala Thr Leu Val Gly Pro Pro  
 580 585 590  
 Ile Ala Gly Leu Leu Lys Asp Leu Thr Gly Ser Tyr Lys Val Ser Phe  
 595 600 605  
 Tyr Phe Ala  
 610

<210> 5  
 <211> 487  
 <212> PRT  
 <213> homo sapiens

<400> 5  
 Met Leu Lys Arg Glu Gly Lys Val Gln Pro Tyr Thr Lys Thr Leu Asp  
 1 5 10 15  
 Gly Gly Trp Gly Trp Met Ile Val Ile His Phe Phe Leu Val Asn Val  
 20 25 30  
 Phe Val Met Gly Met Thr Lys Thr Phe Ala Ile Phe Phe Val Val Phe  
 35 40 45  
 Gln Glu Glu Phe Glu Gly Thr Ser Glu Gln Ile Gly Trp Ile Gly Ser  
 50 55 60  
 Ile Met Ser Ser Leu Arg Phe Cys Ala Gly Pro Leu Val Ala Ile Ile  
 65 70 75 80  
 Cys Asp Ile Leu Gly Glu Lys Thr Thr Ser Ile Leu Gly Ala Phe Val  
 85 90 95  
 Val Thr Gly Gly Tyr Leu Ile Ser Ser Trp Ala Thr Ser Ile Pro Phe  
 100 105 110  
 Leu Cys Val Thr Met Gly Leu Leu Pro Gly Leu Gly Ser Ala Phe Leu  
 115 120 125  
 Tyr Gln Val Ala Ala Val Val Thr Thr Lys Tyr Phe Lys Lys Arg Leu  
 130 135 140  
 Ala Leu Ser Thr Ala Ile Ala Arg Ser Gly Met Gly Leu Thr Phe Leu  
 145 150 155 160  
 Leu Ala Pro Phe Thr Lys Phe Leu Ile Asp Leu Tyr Asp Trp Thr Gly  
 165 170 175  
 Ala Leu Ile Leu Phe Gly Ala Ile Ala Leu Asn Leu Val Pro Ser Ser  
 180 185 190  
 Met Leu Leu Arg Pro Ile His Ile Lys Ser Glu Asn Asn Ser Gly Ile  
 195 200 205  
 Lys Asp Lys Gly Ser Ser Leu Ser Ala His Gly Pro Glu Ala His Ala  
 210 215 220  
 Thr Glu Thr His Cys His Glu Thr Glu Glu Ser Thr Ile Lys Asp Ser  
 225 230 235 240  
 Thr Thr Gln Lys Ala Gly Leu Pro Ser Lys Asn Leu Thr Val Ser Gln  
 245 250 255  
 Asn Gln Ser Glu Glu Phe Tyr Asn Gly Pro Asn Arg Asn Arg Leu Leu

[illegible]

<210> 6

<212> PRT

<220>

## <221> VARIANT

<223> The amino acid at position 1 can be glu.

<222> 3

<223> The amino acid at position 3 can be ser.

<222> 4

<223> The amino acid at position 4 can be phe.

<222> 5

<223> The amino acid at position 5 can be ala.

Asp Gly Gly Trp Gly Trp  
1 5

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<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> consensus

<221> VARIANT  
<222> 5  
<223> The amino acid at position 5 can be lys.

<221> VARIANT  
<222> 6  
<223> The amino acid at position 6 can be leu.

<221> VARIANT  
<222> 11  
<223> The amino acid at position 11 can be ala.

<221> VARIANT  
<222> (1)...(16)  
<223> Xaa = Any Amino Acid

<400> 7  
Tyr Phe Xaa Lys Arg Arg Xaa Leu Ala Xaa Gly Xaa Ala Xaa Ala Gly  
1 5 10 15

<210> 8  
<211> 22  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> consensus

<221> VARIANT  
<222> (1)...(22)  
<223> Xaa = any amino acid

<400> 8  
Leu Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa  
1 5 10 15  
Xaa Xaa Xaa Xaa Xaa Leu  
20